

App. No. 09/930,659

Preliminary Amendment Dated December 5, 2005

**Listing of claims:**

1. (Currently amended) A computer-readable medium having a data structure stored thereon for use in synchronizing an object between a server and a client, the data structure comprising:

a synchronization message including ~~a plurality of message portions for grouping~~ synchronization request activities and synchronization response activities ~~synchronization activities~~ in a single message, wherein the message portions include:

a version portion of the synchronization message for indicating a protocol that indicates which version of the synchronization message data structure for synchronizing is being used to synchronize the object;

a command portion of the synchronization message for indicating that indicates a synchronization action to take to synchronize the object between the server and the client; and

~~if an error occurs while the synchronization action is performed, a response portion of the synchronization message for indicating a synchronization action error that indicates that the synchronization action was not successful.~~

2. (Currently amended) The computer-readable medium of claim 1, wherein the command portion includes a fetch portion for identifying an object to be synchronized, having an object ID, indicating that the server should send an object associated with the object ID to the client.

3. (Currently amended) The computer-readable medium of claim 2, wherein the fetch portion indicates that the object is the only object to be synchronized. ~~indicates that only the object should be sent.~~

4. (Currently amended) The computer-readable medium of claim 1, wherein the command portion includes a window size portion for indicating that indicates a maximum number of objects to synchronize for the server to send.

5. (Currently amended) The computer-readable medium of claim 1, wherein the command portion includes a more available portion for indicating that indicates that the server has more objects are available to synchronize send to the client.

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6. (Currently amended) The computer-readable medium of claim 1, further comprising an options portion that includes a second synchronization message ~~another data structure~~.

7. (Currently amended) The computer-readable medium of claim 6, wherein the second synchronization message ~~another data structure~~ is configurable ~~used~~ to send a second set of additional commands between the client and the server.

8. (Currently amended) The computer-readable medium of claim 6, wherein the second synchronization message ~~another data structure~~ is configurable ~~used~~ to send data between the client and the server.

9. (Currently amended) The computer-readable medium of claim 1, further comprising ~~if the client requests updates from the server~~, a get changes portion that requests ~~indicates that the server to should send~~ updates to the client.

10. (Currently amended) The computer-readable medium of claim 1, further comprising ~~if the client sends an object to be added to the server~~, a response portion that includes a server ~~indicates which ID that the server~~ associated with the object when the client sends an object for addition to the server.

11. (Currently amended) The computer-readable medium of claim 10, wherein the response portion includes a client ~~further indicates an ID that~~ the client sent with the object.

12. (Currently amended) The computer-readable medium of claim 1, wherein the object is associated with more ~~a plurality of other~~ objects to be synchronized.

13. (Currently amended) The computer-readable medium of claim 1, wherein the synchronization message is grouped with a second synchronization message to form the single message ~~data structure is embedded within other data~~.

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14. (Currently amended) The computer-readable medium of claim 1, wherein the synchronization message data structure is associated with ~~embedded in~~ an email.

15. (Currently amended) The computer-readable medium of claim 1, wherein the synchronization message data structure is transmitted using a hypertext transport protocol.

16. (Currently amended) The computer-readable medium of claim 1, wherein the command portion includes an object data portion having object update data ~~a data portion that contains data associated with the object.~~

17. (Currently amended) The computer-readable medium of claim 1, further comprising a status portion for indicating that indicates a status of ~~performing~~ the synchronization action.

18. (Currently amended) The computer-readable medium of claim 1, wherein the synchronization message data structure further comprises:

~~another~~ a second command portion for indicating a second that indicates ~~another~~ synchronization action ~~to take to synchronize a second another~~ object between the server and the client; and

~~if an error occurs while the other synchronization action is performed,~~ another a second response portion for indicating that indicates that the second other synchronization action was unsuccessful when an error occurs not successful.

19. (Currently amended) The computer-readable medium of claim 18, wherein the synchronization message data structure further comprises: ~~if the client requests information,~~ an information response portion that includes requested information when the client requests information from the server that contains the requested information.

20. (Currently amended) The computer-readable medium of claim 1, wherein the synchronization message data structure further comprises: ~~if the client requests information,~~ an information response portion that includes requested information when the client requests information that contains the requested information.

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21. (Currently amended) A system for synchronizing an object, comprising:

a server configured to receive a synchronization message a data structure, wherein the synchronization message includes the data structure including a plurality of portions for grouping synchronization request activities and synchronization response activities synchronization activities in a single synchronization message data structure that is received by the server, wherein the portions include:

a version portion of the synchronization message for indicating a ~~indicating which~~ version of the synchronization message for synchronizing data structure is being used to synchronize the object; and

a command portion of the synchronization message for indicating ~~that indicates~~ a synchronization action to take to synchronize the object; and

a mobile device associated with ~~coupled to~~ the server, wherein the mobile device is configured to send the synchronization message data structure to the server to synchronize the object.

22. (Currently amended) The system of claim 21, wherein the server is further configured to send a second synchronization message another data structure having:

a second version portion of the second synchronization message ~~for indicating a~~ indicating which ~~version of the second synchronization message~~ for synchronizing another data structure is being used to synchronize the object;

~~if an error associated with the synchronization action occurred while processing the data structure, a response portion~~ for indicating an error when an error is associated with the synchronization action. that indicates the error.

23. (Currently amended) The system of claim 22, wherein the response portion is omitted from the synchronization message when an error is not associated with the synchronization action if an error does not occur, the data structure omits the response portion.

24. (Currently amended) The system of claim 22, wherein the second synchronization message other data structure further comprises: ~~if the mobile device requests information, an information response portion for that contains the requested information~~ when the mobile device requests information.

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25. (Currently amended) The system of claim 23, wherein the second synchronization message ~~other data structure~~ further comprises a command portion for indicating a second ~~that indicates another~~ synchronization action to take to synchronize ~~another~~ a second object between the server and the mobile device.

26. (Currently amended) The system of claim 24, wherein the server is further configured to update data on ~~another~~ a second server using the synchronization message ~~data structure~~.

27. (Currently amended) The system of claim 26, wherein the server ~~comprises~~ is a proxy server.

28. (Currently amended) The system of claim 27, wherein the proxy server associates an object on the mobile device with an object on the second ~~other~~ server.

29. (Currently amended) A mobile device having a data store and computer-executable instructions, the computer-executable instructions, comprising:

formatting a synchronization message having ~~a plurality of~~ message portions for grouping synchronization request activities and synchronization response activities ~~synchronization activities~~ in a single message, wherein the message portions include:

a version ID portion indicating a version of a synchronization ~~protocol~~; and

a commands portion, ~~the commands portion including information that defines~~ defining server changes for causing to be made to a server to cause data on the server to synchronize ~~system to be synchronized~~ with data on the data store; and transmitting the synchronization ~~formatted~~ message to the server.

30. (Currently amended) The device of claim 29, wherein the synchronization message further includes: ~~if an error occurred while the mobile device was updating the data store,~~ a response portion for indicating the synchronization ~~that indicates that the update was unsuccessful when an error occurs~~ ~~not successful~~.

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31. (Currently amended) The device of claim 30, wherein the synchronization message further includes: ~~if the mobile device requests information,~~ an information response portion that includes contains the requested information when the mobile device requests information.

32. (Currently amended) The device of claim 30, wherein the commands portion includes a fetch portion for identifying an object located on the server for updating the mobile device having an object ID, ~~indicating that the server should send an object associated with the object ID to the mobile device.~~

33. (Currently amended) The device of claim 30, wherein the commands portion includes a window size for indicating that indicates a maximum number of objects for the server to synchronize send.

34. (Currently amended) A server having a data store and computer-executable instructions, the computer-executable instructions, comprising:

receiving an update synchronization message having a ~~plurality of~~ message portions for grouping synchronization request activities and synchronization response activities ~~synchronization activities~~ in a single message, wherein the message portions include:

~~another a first~~ version ID portion for indicating a version of a synchronization protocol; and

~~another a first~~ commands portion, including information that defines defining server changes for causing to be made on the server to cause the data store to be synchronized with data on a mobile device; and

sending a response synchronization message having a ~~plurality of~~ message portions for grouping synchronization request activities and synchronization response activities ~~synchronization activities~~ in a single message, wherein the message portions include:

~~a second~~ version ID portion for indicating a version of a synchronization protocol; and

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a second commands portion, ~~including information that defines defining mobile device changes for causing to be made on the mobile device to cause the~~ data store to be synchronized with data on the mobile device; and

~~if an error occurred while processing the update synchronization message, a response portion for indicating that indicates that synchronization was unsuccessful when an error occurs during processing of the update synchronization message not successful.~~

35. (Currently amended) The server of claim 34, further comprising:  
a parser for parsing the update synchronization message; and  
a generator for generating the response synchronization message.

36. (Currently amended) The server of claim 35, wherein the update synchronization message and the response synchronization message include a markup language ~~each are encoded using a markup language.~~

37. (Currently amended) The server of claim 36, wherein the markup language includes ~~is~~ an extensible markup language.

**Clean Claim Set:**

1. A computer-readable medium having a data structure stored thereon for synchronizing an object between a server and a client, the data structure comprising:
  - a synchronization message including message portions for grouping synchronization request activities and synchronization response activities in a single message, wherein the message portions include:
    - a version portion of the synchronization message for indicating a protocol version of the synchronization message for synchronizing the object;
    - a command portion of the synchronization message for indicating a synchronization action to synchronize the object between the server and the client; and
    - a response portion of the synchronization message for indicating a synchronization action error.
2. The computer-readable medium of claim 1, wherein the command portion includes a fetch portion for identifying an object to be synchronized.
3. The computer-readable medium of claim 2, wherein the fetch portion indicates that the object is the only object to be synchronized.
4. The computer-readable medium of claim 1, wherein the command portion includes a window size portion for indicating a maximum number of objects to synchronize.
5. The computer-readable medium of claim 1, wherein the command portion includes a more available portion for indicating that more objects are available to synchronize.
6. The computer-readable medium of claim 1, further comprising an options portion that includes a second synchronization message.
7. The computer-readable medium of claim 6, wherein the second synchronization message is configurable to send a second set of commands between the client and the server.



8. The computer-readable medium of claim 6, wherein the second synchronization message is configurable to send data between the client and the server.

9. The computer-readable medium of claim 1, further comprising a get changes portion that requests the server to send updates to the client.

10. The computer-readable medium of claim 1, further comprising a response portion that includes a server ID that the server associated with the object when the client sends an object for addition to the server.

11. The computer-readable medium of claim 10, wherein the response portion includes a client ID that the client sent with the object.

12. The computer-readable medium of claim 1, wherein the object is associated with more objects to be synchronized.

13. The computer-readable medium of claim 1, wherein the synchronization message is grouped with a second synchronization message to form the single message.

14. The computer-readable medium of claim 1, wherein the synchronization message is associated with an email.

15. The computer-readable medium of claim 1, wherein the synchronization message is transmitted using a hypertext transport protocol.

16. The computer-readable medium of claim 1, wherein the command portion includes an object data portion having object update data.

17. The computer-readable medium of claim 1, further comprising a status portion for indicating a status of the synchronization action.

18. The computer-readable medium of claim 1, wherein the synchronization message further comprises:

a second command portion for indicating a second synchronization action to synchronize a second object between the server and the client; and

a second response portion for indicating that the second synchronization action was unsuccessful when an error occurs.

19. The computer-readable medium of claim 18, wherein the synchronization message further comprises an information response portion that includes requested information when the client requests information from the server.

20. The computer-readable medium of claim 1, wherein the synchronization message further comprises an information response portion that includes requested information when the client requests information.

21. A system for synchronizing an object, comprising:

a server configured to receive a synchronization message, wherein the synchronization message includes portions for grouping synchronization request activities and synchronization response activities in a single synchronization message, wherein the portions include:

a version portion of the synchronization message for indicating a version of the synchronization message for synchronizing the object;

a command portion of the synchronization message for indicating a synchronization action to take to synchronize the object; and

a mobile device associated with the server, wherein the mobile device is configured to send the synchronization message to the server to synchronize the object.

22. The system of claim 21, wherein the server is configured to send a second synchronization message having:

a second version portion of the second synchronization message for indicating a version of the second synchronization message for synchronizing the object;

a response portion for indicating an error when an error is associated with the synchronization action.

23. The system of claim 22, wherein the response portion is omitted from the synchronization message when an error is not associated with the synchronization action.

24. The system of claim 22, wherein the second synchronization message further comprises an information response portion for requested information when the mobile device requests information.

25. The system of claim 23, wherein the second synchronization message comprises a command portion for indicating a second synchronization action to synchronize a second object between the server and the mobile device.

26. The system of claim 24, wherein the server is further configured to update data on a second server using the synchronization message.

27. The system of claim 26, wherein the server is a proxy server.

28. The system of claim 27, wherein the proxy server associates an object on the mobile device with an object on the second server.

29. A mobile device having a data store and computer-executable instructions, the computer-executable instructions, comprising:

formatting a synchronization message having message portions for grouping synchronization request activities and synchronization response activities in a single message, wherein the message portions include:

a version ID portion indicating a version of a synchronization protocol;

a commands portion defining server changes for causing data on the server to synchronize with data on the data store; and  
transmitting the synchronization message to the server.

30. The device of claim 29, wherein the synchronization message further includes a response portion for indicating the synchronization was unsuccessful when an error occurs.

31. The device of claim 30, wherein the synchronization message further includes an information response portion that includes the requested information when the mobile device requests information.

32. The device of claim 30, wherein the commands portion includes a fetch portion for identifying an object located on the server for updating the mobile device.

33. The device of claim 30, wherein the commands portion includes a window size for indicating a maximum number of objects for the server to synchronize.

34. A server having a data store and computer-executable instructions, the computer-executable instructions, comprising:

receiving an update synchronization message having message portions for grouping synchronization request activities and synchronization response activities in a single message, wherein the message portions include:

a first version ID portion for indicating a version of a synchronization protocol;

a first commands portion defining server changes for causing the data store to be synchronized with data on a mobile device;

sending a response synchronization message having message portions for grouping synchronization request activities and synchronization response activities in a single message, wherein the message portions include:

a second version ID portion for indicating a version of a synchronization protocol;

a second commands portion defining mobile device changes for causing the data store to be synchronized with data on the mobile device; and

a response portion for indicating that synchronization was unsuccessful when an error occurs during processing of the update synchronization message.

35. The server of claim 34, further comprising:

a parser for parsing the update synchronization message; and

a generator for generating the response synchronization message.

36. The server of claim 35, wherein the update synchronization message and the response synchronization message include a markup language.

37. (Currently amended) The server of claim 36, wherein the markup language includes an extensible markup language.